UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,805	06/28/2001	Brian M. Grunkemeyer	MS174304.1	7100

27195 7590 11/01/2005		EXAMINER
AMIN & TUROCY, LLP		LEE, ANDREW CHUNG CHEUNG
24TH FLOOR, NATIONAL CITY CENTER		

ART UNIT	PAPER NUMBER
2664	

AMIN & TUROCY, LLP
24TH FLOOR, NATIONAL CITY CENTER
1900 EAST NINTH STREET
CLEVELAND, OH 44114

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		09/893,805	GRUNKEMEYER ET AL.
		Examiner	Art Unit	
		Andrew C. Lee	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 June 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>05/13/2005</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The lengthy specification has not been checked to the extent necessary to

determine the presence of all possible minor errors. Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the

specification.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1 – 30 are rejected under 35 U.S.C. 102(e) as being anticipated by

Williams (U.S. 6591272 B1).

Regarding claim 1, Williams discloses the limitation of a system for converting a

synchronous method call on a target method to an asynchronous method call (column

15, lines 27 – 53), the system comprising: a pattern generator operable to break the

synchronous method call into one or more constituent parts (Abstract, lines 1 – 17;

column 1, lines 23 – 29); and a pattern data store, operably connected to the pattern

generator, the pattern data store adapted to store data associated with converting a

synchronous method call to an asynchronous method call (Abstract, lines 1 – 17;

column 4, lines 48 – 59).

Regarding claim 2, Williams discloses the limitation of the system of claimed

where the one or more constituent parts comprise at least one of: a begin asynchronous

operation method (column 8, lines 60 – 65); an end asynchronous operation method, an

asynchronous call state object; and an asynchronous call result object.

Regarding claim 3, Williams discloses the limitation of the system of claimed

where the begin asynchronous operation method accepts as inputs at least one of: input

parameters presented to the target method; input/output parameters presented to the

target method; parameters passed by reference to the target method; the address of an

asynchronous callback routine (column 15, lines 46 – 47); and the asynchronous call

state object.

Regarding claim 4, Williams discloses the limitation of the system of claimed

where the begin asynchronous operation method returns the asynchronous result object

(column 16, lines 15 – 67; column 17, lines 1 – 5).

Regarding claim 5, Williams discloses the limitation of the system of claimed

where the end asynchronous operation method accepts as inputs at least one of:

input/output parameters presented to the target method (column 16, lines 11 – 14);

output parameters presented to the target method; parameters passed by reference to

the target method; and the asynchronous call result object.

Regarding claim 6, Williams discloses the limitation of the system of claimed where the asynchronous call result object comprises: a first field that holds information concerning whether the begin asynchronous operation completed asynchronously (column 125, lines 4 – 11); and a second field that holds information concerning whether a server completed processing the target method (column 125, lines 12 – 26).

Regarding claim 7, Williams discloses the limitation of the system of claimed where the asynchronous call result object provides a waitable object (column 11, lines 13 – 17).

Regarding claim 8, Williams discloses the limitation of the system of claimed where the asynchronous call result object implements an interface, the interface comprising at least one of: an asynchronous call state object get method (column 13, lines 51 – 54); a wait handler object get method; a synchronous call completed field get method; and a target method call completed field get method.

Regarding claim 9, Williams discloses the limitation of the system of claimed where the end asynchronous operation is invoked by one of an asynchronous call result poller; the begin asynchronous operation method; an asynchronous call result waiter; and an asynchronous callback routine (column 15, lines 45 – 67; column 16, lines 1 – 14).

Regarding claim 10, Williams discloses the limitation of the system of claimed where the asynchronous call result poller is operable to poll the asynchronous call state object to determine whether the server has completed processing the target method (column 37, lines 44 – 61).

Regarding claim 11, Williams discloses the limitation of the system of claimed where the asynchronous call result waiter is operable to periodically sleep and wakeup, where during an awakened period the asynchronous call result waiter is operable to determine whether the server has completed the target method by examining the asynchronous call result object (column 37, lines 55 – 67).

Regarding claim 12, Williams discloses the limitation of the system of claimed where the asynchronous callback routine is invoked when the server has completed the target method (column 8, lines 11 – 22).

Regarding claim 13, Williams discloses the limitation of the system of claimed where the pattern generator can convert method calls associated with at least one of file input/output, stream input/output, socket input/output, networking (column 2, lines 63 – 65), remoting channels, proxies, web forms, web services and messaging message queues.

Regarding claim 14, Williams discloses the limitation of the system of claimed where the pattern generator can convert method calls associated with file input/output, stream input/output, socket input/output, networking, remoting channels, proxies, web forms, web services and messaging message queues (column 2, lines 63 – 65; column 31, lines 35 – 67; column 32, lines 1 – 46).

Regarding claim 15, Williams discloses the limitation of a computer readable medium storing computer executable components of the system of claim 1 (column 126, claim 7).

Regarding claim 16, Williams discloses the limitation of a system to facilitate

making asynchronous calls on a target method (column 15, lines 27 – 53), the system

comprising: an asynchronous call initializer adapted to accept input parameters from a

client caller and to forward the input parameters towards the target method, the

asynchronous call initializer further adapted to establish a callback routine, where the

callback routine can be invoked upon completion of the target method, the

asynchronous call initializer further adapted to accept a state object and to populate one

or more fields in the state object with state values associated with the asynchronous

call, the asynchronous call initializer further adapted to return a result object to the client

caller (column 15, lines 21 – 53; Fig. 3, column 8, lines 11 – 22); an asynchronous call

completer adapted to accept results generated by the target method and to supply the

results to the client caller, the asynchronous call completer further adapted to update

the state object, the asynchronous call completer further adapted to update the result

object; and a state tracker, operable to track and log state related to processing

associated with the asynchronous call initializer, the asynchronous call completer and

the target method, the state tracker further operable to update the state object (column

8, lines 23 – 48; column 15, lines 57 – 67; column 16, lines 1 – 20).

Regarding claim 17, Williams discloses the limitation of a computer readable

medium storing; computer executable components of the system of claim 16 (column 3,

lines 1 – 8; column 126, claim 7, lines 4 – 18).

Regarding claim 18, Williams discloses the limitation of a method for converting

code for a synchronous method call on a target method to code for an asynchronous

method call, the method comprising: receiving a code for a synchronous method call;

passing the code for the synchronous method call through a call conversion process to

produce a code for an asynchronous method call (column 15, lines 21 – 53; column 8,

lines 11 – 22); creating an asynchronous call result object to store results associated

with the asynchronous method call; and creating an asynchronous call state object to

store state information associated with the asynchronous method call (column 8, lines

23 – 59).

Regarding claim 19, Williams discloses the limitation of the method of claimed

where the call conversion process comprises: subdividing the code for the synchronous

method call into constituent parts; and creating one or more asynchronous method call

code segments corresponding to the constituent parts (column 15, lines 25 – 53;

column 16, lines 11 – 19; lines 65 –67; column 17, lines 1 – 5).

Regarding claim 20, Williams discloses the limitation of the method of claimed

where the constituent parts comprise at least one of a begin operation that will not block

due to asynchronous method calling; and an end operation that will not block due to

asynchronous method calling (column 17, lines 22 – 25).

Regarding claim 21, Williams discloses the limitation of the method of claimed

where the end operation is invoked by one of processing associated with polling a field

in the asynchronous call state object; processing associated with waiting on the

asynchronous call result object; the begin operation; and an asynchronous callback

routine (column 11, lines 47 – 64).

Regarding claim 22, Williams discloses the limitation of the method of claimed
where code for synchronous method calls associated with at least one of file
input/output; stream input/output, socket input/output, networking (column 2, lines 63 –
65), remoting channels, proxies, web forms, web services and messaging message
queues can be converted.

Regarding claim 23, Williams discloses the limitation of the method of claimed
where code for synchronous method calls associated with file input/output, stream
input/output, socket input/output, networking, remoting channels, proxies, web forms,
web services and messaging message queues can be converted (column 2, lines 63 –
65; column 31, lines 35 – 67; column 32, lines 1 – 46).

Regarding claim 24, Williams discloses the limitation of a computer readable
medium storing computer executable instructions for a method for converting code for a
synchronous method call on a target method to code for an asynchronous method call
(column 126, claim 7, lines 5 – 9), the method comprising: dividing the synchronous
method call into at least one of a non-blocking asynchronous begin operation and a
non-blocking asynchronous end operation (column 126, lines 19 – 43); and associating
a call state object to at least one of the non-blocking asynchronous begin operation and
the non-blocking asynchronous end operation (column 126, lines 44 – 49).

Regarding claim 25, Williams discloses the limitation of a method for facilitating
asynchronous method calls on a target method (column 15, lines 27 – 53), the method
comprising: receiving a request from a calling client to perform processing associated

with beginning an asynchronous call to a target method (column 8, lines 14 – 17; lines

60 – 64); initializing a state tracking object; initializing a result object; queuing a call to

the target method, where the call is queued in a thread pool; returning control and a

result object to the calling client (column 62, lines 50 – 53; column 63, lines 24 – 32);

receiving a request from the calling client to perform processing associated with ending

the asynchronous call to the target method; and returning control and a result consistent

with the result of the target method to the calling client upon completion of the

processing associated with ending the asynchronous call to the target method (column

15, lines 45 – 49; column 16, lines 11 – 20).

Regarding claim 26, Williams discloses the limitation of the method of claimed

where the request from the calling client to perform processing associated with ending

the asynchronous call to the target method is controlled by one of polling process and a

waiting process (column 16, lines 65 – 67; column 17, lines 1 – 5).

Regarding claim 27, Williams discloses the limitation of a computer readable

medium storing computer executable instructions operable to perform a method for

facilitating asynchronous method calls to a target method (column 126, claim 7, lines 4

– 10), the method comprising: accepting one or more requests from a caller to begin an

asynchronous call to a target method; initializing at least one of a state tracking object

and a result object (column 62, lines 50 – 53; column 63, lines 24 – 32); queuing a call

to the target method; accepting one or more requests to end the asynchronous call to

the target method; and sending at least one of a result and a result object to the caller

(column 15, lines 45 – 49; column 16, lines 11 – 20).

Regarding claim 28, Williams discloses the limitation of a method for facilitating asynchronous method calls to a target method (column 15, lines 27 – 53), the method comprising: receiving a request from a calling client to perform processing associated with beginning an asynchronous call to a target method (column 8, lines 60 – 65); initializing a state tracking object (column 62, lines 50 – 53; column 63, lines 24 – 32); establishing a callback routine, where the callback routine will be invoked upon notification of the completion of the target method, and where the callback routine will invoke processing associated with ending the asynchronous call to the target method (column 15, lines 32 – 53); queuing a call to the target method, where the call is queued in a thread pool (column 29, lines 62 – 67); returning control and a result object to the calling client; invoking the callback routine upon receiving notification of the completion of the target method (column 16, lines 65 – 67; column 17, lines 1 – 5); performing processing associated with ending the asynchronous call to the target method; and returning control and a result consistent with the result of the target method to the calling client upon completion of the processing associated with asynchronous call of the target method (column 16, lines 11 – 14; lines 65 – 67; column 17, lines 1 – 5).

Regarding claim 29, Williams discloses the limitation of a system for converting a synchronous method call to an asynchronous method call (column 15, lines 27 – 53), the system comprising: means for accepting instructions to call a target method synchronously (column 6, lines 57 - 62); means for generating instructions to call the target method asynchronously (column 6, lines 62 – 65); means for generating an object to store results generated in response to performing the instructions to call the target

method asynchronously (column 6, lines 65 - 67); and means for generating an object to store state information associated with performing the instructions to call the target method asynchronously (column 6, lines 65 – 67; column 7, lines 1 – 12).

Regarding claim 30, Williams discloses the limitation of a data packet adapted to be transmitted between two or more computer processes (column 8, lines 11 – 14; column 58, lines 52 – 59), the data packet comprising: a first field operable to store information identifying a target method called by a synchronous method call (column 125, lines 4 – 11; column 15, lines 29 – 32); one or more second fields operable to store parameters intended for the target method (column 125, lines 12 – 26; column 16, lines 11 – 14); a third field operable to store information concerning a callback routine to be invoked when the target method completes; and one or more fourth fields operable to store parameters returned from the target method (column 16, lines 11 – 14; lines 65 – 67; column 17, lines 1 – 5).

Conclusion

4.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

ACL   Oct 18, 2005

Ajit Patel
Primary Examiner